

**REMARKS**

The claims have been amended editorially and to correct those errors noted by the examiner.

**1. Objections to Claims 17 and 18 under 37 CFR 1.75c for being in improper dependent form.**

The Examiner's objection is well taken. The final clause in claim 16 has been canceled and incorporated into dependent claims 19 and 20, thus making claims 17 and 18 properly dependent of claim 16.

**2-3. Rejections to Claims 21, 3, 9, 13, 14, 22, 24-27 and 29 under 35 U.S.C. § 112 ¶ 1 as failing to comply with the written description requirement.**

**Claim 21**

The matter added to Claim 21 is the basic first step to the "motion controlled method." In other words, it is possible to practice the fundamental invention in two back-and-forth swings, and it is this basic first step that is covered in Claim 21. The very last sentence of paragraph 157 of the disclosure regarding the "running average of column display times" feature is an extension of the *disclosed* apparatus, not a critical aspect of the invention *claimed* in Claim 21.

We direct the Examiner's attention to paragraphs 134, 140, 142, 155 and especially 156-157, of the specification together with Figure 6, which disclose this technique of measuring each half-cycle swing to double the measurement accuracy of the present invention over the prior art. In the preferred embodiment of the apparatus, as illustrated in Figure 6, the timing of the

graphic data being sent to the lighted array in each leading half-cycle swing is calculated from the previous swing, not from a running average of past swings.

We further direct the Examiner's attention to paragraph 160 of the disclosure which establishes the importance of sending the graphic data to the lighted array in the leading half-cycle "as the device is swung from left to right" and *not* displayed during the return half-cycle "as the device is swung from right to left" to prevent an unacceptably jittery display.

We respectfully submit that the subject matter added to Claim 21 is not new, since a person of ordinary skill in the art, having reference to the specification (including Fig. 6) would understand that the applicant had possession of the claimed invention, and that the claim should be allowed.

#### **Claims 24 and 25**

The Examiner's rejection of Claims 24 and 25 for adding new matter is well-taken. These claims have been canceled.

#### **Claims 9, 13, 14 and 28**

The Applicant has canceled these claims.

#### **Claims 3, 22 and 29**

Being dependent on Claim 21 we submit that these claims should also be allowed.

**4. Rejection of Claim 18 under 35 U.S.C. § 112 ¶ 1 as failing to comply with the written description requirement.**

We direct the Examiner's attention to paragraph 183, of the specification and respectfully submit that the subject of Claim 18 is adequately disclosed in paragraph 183 to a person of ordinary skill in the art, and that the claim should be allowed.

**7. Rejection of Claims 18, 26 and 27 under 35 U.S.C. § 112 ¶ 2 as being indefinite.**

**Claim 18**

The Examiner's objection is well received. The Applicant has amended Claim 16 to remove its limitation to "a lighted array being substantially fixed." We respectfully submit that with the current amendment to Claim 16, Claim 18 should now be allowed as previously amended.

**Claims 26 and 27**

The Examiner's objection is well taken. The Applicant has canceled these claims.

**8-9. Rejection of Claims 16, 17 and 20 under 35 U.S.C. § 102 as being anticipated by Bell, USPN 4,470,044.**

**Claim 16**

The Applicant has amended Claim 16 to further clarify its improvement over the prior art. The addition of the "double-throw inertial reversal sensor" is a central feature to the current invention and is clearly absent from the Bell disclosure. We respectfully submit that

Claim 16 as currently amended shows significant enhancement over the prior art not anticipated by Bell.

### **Claims 17 and 20**

Being dependent on Claim 16 we submit that these claims should now be allowed to stand as currently amended.

### **10. Rejection of Claim 23 under 35 U.S.C. § 102 as being anticipated by Solomon, USPN 6,404,409 B1.**

The Applicant has amended Claim 23 to further add a limitation (the “double-throw inertial reversal sensor”) that does not appear in the Solomon device, and which, in fact, Solomon teaches away from. For example, the embodiment of the Solomon device upon which the Examiner relies is shown in Solomon Figure 1. Solomon explicitly teaches the use of a wand that has a flexible middle member 16, so that the handle 18 need not move much in order for the user to “twirl” the portion having the LEDs thereon. His preferred switching mechanism relies upon the elastically bendable nature of the middle member 16. See Solomon, col. 3, line 65 to col. 4, Fig. 9. The current amendment to Claim 23 recites the “inertial reversal sensor” switch construction (detailed in Figures 8 and 9 of the Bentley disclosure), which permits the exterior of the light stick to be substantially rigid along its full length.

We respectfully submit that the limitation of the “inertial reversal sensor” to Claim 23 substantially differentiates the current device beyond that which was anticipated by Solomon and that Claim 23 should be allowed to stand as currently amended.

**11. Rejection of Claims 15, 21, 9 and 17 under 35 U.S.C. § 103 as being obvious over the patent to Ohta (USPN 5,444,456) when considered with Molinaroli, USPN 6,265,984.**

**Claim 15**

We invite the Examiner's attention to claim 15 *as it was previously amended* such that the inertial reversal sensor is utilized as a "selector" switch rather than as a simple "on-off" device, and to note that neither Ohta nor Molinaroli teach the idea of using the sensor as a mode selector. This is fully disclosed in paragraphs 143-151 of the original specification.

**Claim 21**

The Applicant has amended Claim 21 to effectively disclaim the alternative "top" and "bottom" mounted inertial sensor embodiments, which neither Ohta nor Molinaroli show, thus we respectfully submit that Claim 21 as currently amended should be allowable. We invite the Examiner's attention to paragraph 135 of the specification.

We respectfully submit this distinction is not an obvious modification of Ohta, and further suggest that the Ohta device is different, and not as good, because his "cycle averaging" method is too slow, and results in a "lagging" display that will be hard for the user to regulate by timing his or her swings. It appears that the problem would cascade on itself as the user tries, with frustration, to modulate his or her swings in response to "obsolete" feedback.

It is further noted that the Ohta inertial switch **24**, is evidently a "single-throw" switch with contacts (**24a** and **24b** in Ohta Fig. 11a) at only one end of the switch assembly. Thus the switch utilized by Ohta can only detect full swing cycles, not half-cycles as explicitly taught in the present invention disclosure. Since neither Ohta nor Molinaroli teach the use of a "double-

throw” inertial switch, we respectfully submit that the presently described device is a substantial improvement over prior art since it utilizes an inertial reversal sensor with contacts at both ends of the to-and-fro motion.

#### **Claims 9 and 14**

The Examiner’s objection is well taken. The Applicant has canceled these claims.

#### **12. Rejection of Claim 3 under 35 U.S.C. § 103(a) as being obvious over the patent to Ohta when considered with Molinaroli and further in view of Tasaki 6,319,425.**

We respectively traverse the rejection of claim 3 because the combination of Tasaki with other references was improper. The Tasaki reference is from a very distinguishable field of endeavor and there is no motivation to combine these references, given the different reasons for obscuring the LED lens in the respective teachings.

#### **13. Rejection of Claim 13 under 35 U.S.C. § 103(a) as being obvious over the patent to Ohta when considered with Molinaroli and further in view of Solomon 6,404,409.**

The Examiner’s objection is well taken. The Applicant has canceled this claim.

**14. Rejection of Claim 18 under 35 U.S.C. § 103(a) as being unpatentable over Bell in view of NakaMats 6,249,998.**

The Examiner has rejected claim 18 as being unpatentable over the combination of NakaMats and Bell. The rejection is respectfully traversed. Bell does not teach the display adjustment claimed by Applicant, and contrary to the Examiner's contention, NakaMats does not provide the teaching absent from Bell.

Applicant's claim 18 recites that “the display being adjusted such that the text and graphics displayed in the lower half of the circle are correctly oriented, *matching the orientation of graphics in the upper half of the circle; whereby a viewer is enabled to view a display in which no text or graphics are inverted.*” (Emphasis added.) NakaMats nowhere in the passage cited by the Examiner teaches or suggests the “matching” of text/graphics from the upper half of the circle with those in the lower half—much less to avoid image inversion as claimed by Applicant. NakaMats merely suggests that the angular position (i.e. relative to the axis of rotation) of a single image can be changed by “uniform rotation” of the bar 1 (although the NakaMats disclosure is gravely vague about how a “uniform” rotation effectuates such a change.)

Because neither Bell nor NakaMats, nor the combination of the two references, discloses a display adjustment whereby text/graphics from one half the circle are “matched” to those appearing in the other half, the rejection of claim 18 over Bell in view of NakaMats is overcome.

**15. Rejection of Claim 22 under 35 U.S.C. § 103(a) as being unpatentable over Ohta when considered with Molinaroli and further in view of Nakagawa 5,826,036.**

We respectfully traverse the rejection of claim 22 because the combination of Molinaroli with Nakagawa was improper. The Nakagawa reference is from a substantially distinguishable field of endeavor and there is no motivation to combine these references, given the different reasons for compressing the text in the respective teachings.

**16. Rejection of Claim 28 under 35 U.S.C. § 103 as being unpatentable over Bell.**

The Examiner's rejection is well received. The Applicant has withdrawn this claim.

**17. Rejection of Claim 29 under 35 U.S.C. § 103(a) as being unpatentable over Ohta in view of Molinaroli and further in view of Bednarz 4,264,845.**

We respectfully traverse the rejection of claim 23 because the combination of Bednarz with other references was improper. The Bednarz reference is from a very distinguishable field of endeavor and there is no motivation to combine these references, given the different reasons for randomizing the display in the respective teachings.

**18. Rejection of Claim 30 under 35 U.S.C. § 103(a) as being unpatentable over Bell in view of Bednarz 4,264,845.**

We respectfully traverse the rejection of claim 30 because the combination of Bednarz with Bell was improper. The Bednarz reference is from a very distinguishable field of endeavor and there is no motivation to combine these references, given the different reasons for randomizing the display in the respective teachings.



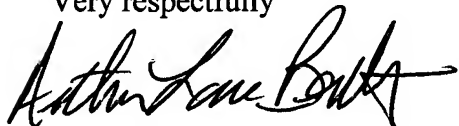
**Conditional Request for Constructive Assistance**

Therefore it is submitted that patentable subject matter is clearly present. If the Examiner agrees but does not feel that the present claims are technically adequate, applicant respectfully requests that the examiner write acceptable claims pursuant to MPEP 707.07(j). This request applies to all of the current claims as presently stated.

**Conclusion**

For all the reasons given above, applicant respectfully submits that the specification and claims are now in proper form, and that the claims comply with Section 112, the claims define over the prior art under Section 102, and the claimed distinctions are of patentable merit under Section 103. Accordingly, applicant submits that this application is now in full condition for allowance, which action applicant respectfully solicits.

Very respectfully

A handwritten signature in black ink, appearing to read "Arthur Lane Bentley", with a stylized flourish at the end.

Arthur Lane Bentley

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I hereby certify that this correspondence, and attachments, if any, will be deposited with the United States Postal Service by First Class Mail, postage prepaid, in an envelope addressed to "Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

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A handwritten signature in black ink, reading "Arthur Lane Bentley", is written over a horizontal line.

Arthur Lane Bentley, Applicant